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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,181	06/12/2001	Ikuya Kikuchi	041514-5123	1412

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
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2652

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DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/878,181

Applicant(s)

KIKUCHI ET AL.

Examiner

Michael V Battaglia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4 and 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1, 2 and 5-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of Group I and the species of Fig. 2 drawn to claims 1-2 and 5-9 in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 10-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected Group II, there being no allowable generic or linking claim. Claims 3-4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the nonelected species of Fig. 4, there being no allowable generic or linking claim.

### *Priority*

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

3. Figures 7-9 should be designated by a legend such as –Prior Art– because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

4. The disclosure is objected to because of the following informalities:

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- a.) On line 22 of page 13, the examiner suggests replacing “to abrade” with - abrading-.
- b.) On line 22 of page 14, the examiner suggests replacing “convention” with -conventional-.
- c.) On line 24 of page 14, the examiner suggests removing “pieces” or “parts”.
- d.) On line 20 of page 15, the examiner suggests replacing “necessary” with -unnecessary-.

Appropriate correction is required.

5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### *Claim Objections*

6. Claims 1, 3, 5, and 7-9 are objected to because of the following informalities:
- a. On lines 5, 7, and 11 of claim 1; lines 3 and 4 of claim 7; lines 4, 7, and 11 of claim 8; and lines 5, 7, and 11 of claim 9, the examiner suggests replacing “opposing to” with -opposed to- or -opposing-.
  - b. On line 7 of claims 1, 8, and 9, the examiner suggests replacing “passing” with -passes-.
  - c. On lines 4 and 6 of claim 5, the examiner suggests replacing “ball” with -sphere-.

Appropriate correction is required.

*Claim Rejections - 35 USC § 112*

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 5 and 6 limit the center curvature of the convex aspherical surface shape of the first optical element to a specified range that is dependent on the volumes of the first and second optical elements. The volume of the first optical element is given as 11.5 cubic millimeters (Page 16, line 21). No volume is disclosed for the second optical element and the range center curvature radii is not explicitly disclosed. One skilled in the art has no way of determining the range of acceptable center curvature radii of the first optical element because the volume of the first optical element is not provided for the elected species of Fig. 2. As such, too much is left for conjecture and undue experimentation. The examiner will use 16.5 cubic millimeters as the volume of the second optical element in the prior art rejections below because that is the volume provided for the second lens element (Page 21, line 5).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. It is unclear how a range of length can be equal to **and** larger than another length. The examiner suggests replacing "and" in line 4 with -or-.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 and 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Ori (US 6,353,588).

In regard to claim 1, Ori discloses a complex objective lens having a convex aspherical surface shape comprising: a first optical element (Fig. 1, element L1) having a first surface including a convex aspherical surface shape (Fig. 1, element R1 and Col. 6, lines 4-7) and an opposite side surface opposing to the first surface (Fig. 1, element R2); and a second optical element (Fig. 1, element L2) having an exit surface through which an optical beam passes (Fig. 1, element R4) and an entry surface opposing to the exit surface (Fig. 1, element R3), wherein the opposite side surface opposing to the first surface of the first optical element and the entry surface opposing to the exit surface of the second optical element are directly contacted to each other (Fig. 1).

In regard to claim 2, Ori discloses that the first optical element has a refractive index larger than the refractive index of the second optical element (Col. 6, Table 2).

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optical pickup device characterized by comprising a complex objective lens including: a first optical element

In regard to claim 8, Ori discloses an optical pickup device (Col. 1, line 65-Col. 2, line 2) characterized by comprising a complex objective lens including: a first optical element (Fig. 1, element L1) having a first surface including a convex aspherical surface shape (Fig. 1, element R1 and Col. 6, lines 4-7) and an opposite side surface opposing to the first surface (Fig. 1, element R2); and a second optical element (Fig. 1, element L2) having an exit surface through which an optical beam passes (Fig. 1, element R4) and an entry surface opposing to the exit surface (Fig. 1, element R3), wherein the opposite side surface opposing to the first surface of the first optical element and the entry surface opposing to the exit surface of the second optical element are directly contacted to each other (Fig. 1).

In regard to claim 9, Ori discloses an optical recording/reproducing apparatus (Col. 1, line 65-Col. 2, line 2) characterized by comprising an optical pickup device having a complex objective lens including: a first optical element (Fig. 1, element L1) having a first surface including a convex aspherical surface shape (Fig. 1, element R1 and Col. 6, lines 4-7) and an opposite side surface opposing to the first surface (Fig. 1, element R2); and a second optical element (Fig. 1, element L2) having an exit surface through which an optical beam passes (Fig. 1, element R4) and an entry surface opposing to the exit surface (Fig. 1, element R3), wherein the opposite side surface opposing to the first surface of the first optical element and the entry surface opposing to the exit surface of the second optical element are directly contacted to each other (Fig. 1).

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10. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Katsuma (US 6,646,817).

Katsuma discloses a complex objective lens having a convex aspherical surface shape comprising: a first optical element (Figs. 1A and 1B, element 1) having a first surface including a convex aspherical surface shape (Col. 9, Table 1, lens surface 1) and an opposite side surface opposing to the first surface (Col. 9, Table 1, lens surface 2); and a second optical element (Figs. 1A and 1B, element 2) having an exit surface through which an optical beam passes (Col. 9, Table 1, lens surface 3) and an entry surface opposing to the exit surface (Col. 9, Table 1, lens surface 2), wherein the opposite side surface opposing to the first surface of the first optical element and the entry surface opposing to the exit surface of the second optical element are directly contacted to each other (Figs. 1A and 1B).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuma in view of Dolgoff (US 6,310,733).

Katsuma discloses the complex objective lens according to claim 1. Katsuma further discloses that the first and second optical elements are made of a glass material (Col. 6, lines 6-7) and that the opposite side surface opposing to the first surface of the first



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optical element and the entry surface opposing to the exit surface of the second optical element are formed by being contacted to make close adherence to one another (Col. 5, line 36 and Col. 6, lines 7-8). Katsuma does not disclose that the opposite side surface opposing to the first surface of the first optical element and the entry surface opposing to the exit surface of the second optical element are formed by being abraded.

Dolgoff discloses abrading a lens during manufacture to promote better adherence (Col. 4, lines 1-3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the opposite side surface opposing to the first surface of the first optical element and the entry surface opposing to the exit surface of the second optical element of Katsuma by abrasion as suggested by Dolgoff, the motivation being to improve adherence.

#### ***Citation of Relevant Prior Art***

12. Yamamoto et al (US 6,058,095) (Figs. 9, 74, and 80) and Kim et al (US 6,590,851) (Fig. 3) disclose a complex objective lens having a convex aspherical surface shape comprising: a first and second optical elements made of glass and in direct contact with each other. Kitamura et al (US 6,438,089) discloses a complex objective lens having a convex aspherical surface shape comprising: a first and second optical elements in direct contact with each other (Fig. 11).

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*Allowable Subject Matter*

13. No comment will be made regarding the allowability of claims 5-6 over the prior art of record due to the 112 first and second paragraph rejections in light of the speculation required to interpret these claims in light of the disclosure.

*Conclusion*

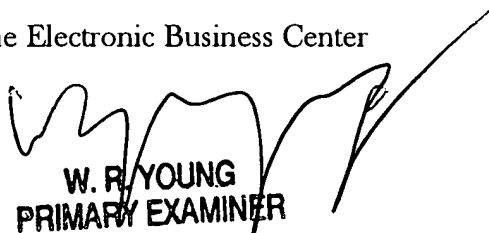
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



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PRIMARY EXAMINER